

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A lighting device ~~including~~ comprising:
at least a light source ~~(LS)~~ for emitting light rays and being oriented along a source axis; and
~~means a lens~~ for guiding said light rays on a projection plane ~~(PP), characterized in that said guiding means are formed by a~~;
the lens (OD) presenting a cylindrical portion (CYL) extending along an a lens axis (AX) perpendicular to said projection plane and to said source axis, and at least a convex shaped surface ~~(CSH)~~
extending at an extremity of said cylindrical portion and adapted to direct a portion of the light rays emitted from said light source towards said projection plane.

2. (Currently Amended) A The lighting device as claimed in

claim 1, wherein said cylindrical portion has a base ~~chosen~~ chosen among a circular base, a curve base, a meniscus base, a fresnel base.

3. (Currently Amended) A The lighting device as claimed in claim 1, wherein said lens is shaped such as two convex surfaces are extending at both extremities of said cylindrical portion.

4. (Currently Amended) A The lighting device as claimed in claim 1, wherein said convex surface is ~~an~~ a hemispherical surface symmetrical in rotation around said ~~cylindrical portion~~ lens axis.

5. (Currently Amended) A The lighting device as claimed in claim 1, wherein said convex surface is parabolic.

6. (Currently Amended) A The lighting device as claimed in claim 1, said lighting device comprising several light emitting diodes for a same lens.

7. (Currently Amended) A The lighting device as claimed in

claim 1, wherein said projection plane is a sheet of a transparent material adapted to transmit the light by refraction and diffusion.

8. (Currently Amended) ~~A~~ The lighting device as claimed in claim 1, wherein said lighting device further includes an optical element ~~(GOB)~~ placed beyond the lens with respect to the light source, said optical element presenting features drawn line by line in order that said lighting device project ~~a significant~~ an image on said projection plane.

9. (New) The lighting device of claim 1, wherein the convex shaped surface is configured to reflect the light rays towards the projection plane.

10. (New) The lighting device of claim 1, wherein the convex shaped surface is configured to direct the light rays along strips in a plane perpendicular to the lens axis.

11. (New) The lighting device of claim 1, wherein the lens further comprises a further convex shaped surface extending at a

further extremity of the cylindrical portion, the convex shaped surface and the further convex shaped surface being configured to reflect said light rays towards said projection plane.

12.(New) The lighting device of claim 11, wherein the convex shaped surface is a hemispherical shaped surface and the further convex shaped surface is a paraboloidal shaped surface.

13.(New) The lighting device of claim 12, wherein the hemispherical shaped surface is located further away from the projection plane than the paraboloidal shaped surface.

14.(New) The lighting device of claim 12, wherein a focus point of the paraboloidal shaped surface corresponds to a position of the light source.

15.(New) The lighting device of claim 1, wherein a position of the light source along a direction of the lens axis corresponds to a length of a light beam projected on the projection plane so that adjusting the position changes the length.

16.(New) The lighting device of claim 1, wherein a position of the light source along a direction of the lens axis corresponds to a length and a light level of a light beam projected on the projection plane so that adjusting the position changes the length and the light level.